

**ROLE STRESS AND OUTCOME VARIABLES:
MODERATING EFFECTS OF INDIVIDUAL DIFFERENCES**

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**ROLE STRESS AND OUTCOME VARIABLES:
MODERATING EFFECTS OF INDIVIDUAL DIFFERENCES**

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	v
LIST OF FIGURES	vi
SUMMARY	vii
CHAPTER	
I. INTRODUCTION	1
Role Theory	2
Role Episode Model	3
Naylor, Pritchard, and Ilgen's Theory of Organizations	5
Expectancy Theory	8
Study Objectives and Testable Hypotheses	9
II. METHOD	11
Sample	11
Research Variables and Instruments	11
Procedure	13
III. RESULTS	15
IV. DISCUSSION	27
APPENDIX A - Role Conflict/Ambiguity Scale	30
APPENDIX B - Academic Satisfaction Scale	69
APPENDIX C - Social Satisfaction	71
APPENDIX D - State-Trait Anxiety Inventory	72
APPENDIX E - Positive and Negative Affect Schedule (PANAS)	74
APPENDIX F - Personal Information Sheet	75
REFERENCES	76

LIST OF TABLES

TABLE

1	Means and Standard Deviations for Role Conflict/Role Ambiguity Items.....	20
2	Correlation Matrix: Role Stress and Outcome variables.....	21
3	Regression: Moderating effects of P-E, E-O and V on Role Stress, Academic and Social Satisfaction	22
4	Zero Order and Partial Correlations: Role Stress, Academic and Social Satisfaction controlling for P-E, E-O and V	23
5	Regression: Moderating Effects of P-E, E-O and V on Role Stress, Trait Anxiety, and G.P.A.....	25
6	Zero Order and Partial Correlations: Role Stress, Trait Anxiety, and G.P.A. controlling for P-E, E-O and V	26

LIST OF FIGURES

1	Factor Analysis Matrix: Scree Plot of Eigenvalues	16
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SUMMARY

The literature on role conflict and role ambiguity in the work place has been extensive. Although most of this literature claims that these psychological constructs have negative consequences for workers in the form of reduced job satisfaction, productivity, and increased anxiety levels, some evidence indicates no relationship between these variables. Inconsistencies also prevail concerning the effect of role conflict and role ambiguity on general anxiety and work performance. The present study among undergraduates examined whether the performance-to-evaluation (P-E) contingency, the evaluation-to-outcome (E-O) contingency and the valence (V) of outcomes were moderating variables of the relationships between role conflict, role ambiguity and three outcome variables: satisfaction, anxiety, and performance. Factor analysis results indicate that the items on the House, Rizzo, and Lirtzman (1970) role conflict/ambiguity scale, which was slightly modified for the student sample, loaded on one factor which was labeled Role Stress, not two distinct factors. Furthermore, the Naylor, Pritchard and Ilgen theory, as it applies to role conflict, was partially supported. The P-E and E-O contingencies were significant moderators of the relationships between Role Stress, Academic Satisfaction, Social Satisfaction, Anxiety, and Performance. However, the results do not support the use of Valence (V) of Outcomes as a moderator between Role Stress and the outcome variables. These findings among 154 college students argue for continued research on role-related constructs in a range of settings.

CHAPTER 1

INTRODUCTION

The constructs of role conflict and role ambiguity in the work place have received a great deal of attention. This emphasis stems from research linking role conflict to a number of health ailments (Sales, 1969), lowered job and life satisfaction (Brief & Aldag, 1976; Miles, 1976) and reduced work productivity (Miles, 1976). Stress induced by role conflict has substantial human, organizational, and economic costs (Newman & Beehr, 1979). Role ambiguity has been linked to increased anxiety, propensity to leave, and lowered job satisfaction (Brief & Aldag, 1976; Miles, 1976; House and Rizzo, 1972).

Although some researchers have linked role conflict to lower job and life satisfaction, other studies (Rizzo, House, & Lirtzman 1970; Hamner and Tosi, 1974) have found very small or no relationship between the variables. Similarly, Ivancevich & Donnelly (1974) found no relationship between role ambiguity and job satisfaction.

Likewise, the research literature has yielded inconsistent results on the relationships between role conflict, role ambiguity and outcome variables, such as anxiety and job performance. Hamner & Tosi (1979), House & Rizzo (1972) and Miles (1976) found a negative relationship between role conflict and anxiety, whereas Tosi & Tosi (1970) and Tosi (1971) found no relationship between the two variables. Similarly, Brief & Aldag (1976) and Greene (1972) found a negative relationship between role ambiguity and performance, whereas Szilagyi & Sims (1975) and Tosi (1971) found no relationship.

The need to explain these conflicting results and develop a better understanding of the nature and measurement of role conflict and ambiguity led to the development of this study.

Defining Role Conflict and Role Ambiguity

Most definitions of role conflict focus on the degree of incongruity between product demands from different people or the same person. Kahn, Wolfe, Quinn & Snoek (1964), for example, define role conflict as the "simultaneous occurrence of two (or more) sets of pressures such that compliance with one would make more difficult compliance with the other." House et al. (1970) define role conflict as the "incongruence" or "incompatibility" of role requirements with the job occupants expectations. These definitions ignore the context of the role conflict or ambiguity situation. For example, "Will the role conflict situation result in negative consequences for the worker? If negative consequences result, does the worker care about the consequences? The present study will investigate these issues to determine whether they influence the relationships between role stress, satisfaction, anxiety, and performance.

Role Theory Conceptualization

Role conflict and role ambiguity are concepts derived from role theory, which describes the behavior of individuals and groups in a social context. It examines the processes of socialization, interdependence among individuals, and specialization of labor and performance (Biddle & Thomas, 1966).

Besides role conflict and role ambiguity, other concepts in role theory include role, focal person, and role set. In the present work-related context, a role is defined as an individual's position or job in an organization. The focal person is the incumbent in the job and the focal person's co-workers and supervisors would be considered members of the role set.

Perceptions of adequate role behavior may result from communication with the role set, modeling the behavior of other individuals in similar positions, or through self-perceptions. Role conflict occurs when there is not adequate resource allocation within a role or between roles. Role ambiguity occurs when the focal person does not have clear information about the expectations of a role, methods for fulfilling role expectations, or consequences of role performance (Kahn et al., 1964).

Role Episode Model

Most of the literature on role conflict and role ambiguity is based upon the "role episode model" which was derived from the research of Kahn et al. (1964). This theoretical model claims that personality, organizational, and interpersonal factors influence the development of role ambiguity and role conflict for individuals within organizations. These three factors also influence the individual's response to role conflict and role ambiguity.

Organizational factors are the breeding ground for role expectations. Members of the role set obtain expectations about how the focal person should perform his/her job based on the focal person's position in the organization, organizational culture, and the

formal reward system. Members' expectations are communicated to the focal person either overtly or covertly. The focal person receives the information, interprets it, and responds.

How the focal person interprets the information depends upon one's personality and the interpersonal relationship between the focal person and the role set member(s) involved. Personality variables which may affect the focal person's interpretation of expectations include the person's values, fears, and sensitivities. Important interpersonal variables include the power the role sender(s) has over the focal person, the affective bonds between the individuals, the degree to which the parties depend on each other for accomplishing job tasks, and the style of communication between the individuals. The focal person's interpretation of the expectations/role pressures may result in a change in behavior, affective reactions, and/or physiological symptoms (Tosi, 1971).

Kahn, Wolfe, Quinn, Snoek & Rosenthal (1964) developed a classification system for different types of intrarole conflict: (a)**intra-sender role conflict**-inability to fulfill the conflicting expectations of one role sender; (b)**inter-sender role conflict**- inability to fulfill the conflicting expectations that are sent by two role senders; (c)**person-role conflict**-occurs when role requirements are incompatible with an individual's values, needs or capacities; and (d)**role-overload** - inability to do assigned work within a specific period of time, which could be the result of either intrasender or intersender role conflict.

A Cognitive Model of Individual Behavior in Organizations

Naylor, Pritchard & Ilgen (1980) have also proposed a conceptual framework, which provides insight into the nature of role conflict. Similar to the Kahn et al.'s (1964) theory, behavior or patterns of behavior are influenced by personality, interpersonal, and organizational factors. Furthermore, certain psychological processes such as motivation, learning, and perception play an important part in behavior.

The relationship between the organization, which includes co-workers, the company's reward system, the individual's job, and the individual is a cyclical one in which information is passed back and forth. This theory is based upon the belief that the behavior of individuals is voluntary and is often the result of choosing among different alternative courses of action.

Naylor et al. (1980) define a role, which can also be referred to as an individual's position or job in the organization, as a pattern or set of nonzero contingencies between a product and an evaluation. Simply put, individuals are expected to perform some behavior or produce a particular product(s) in exchange for money or some other agreed upon item. The individual will receive the money or item if the evaluation of the individual's behavior is positive. The focal person and the role set may have different perceptions of what the individual's role should be. Perceptions of adequate role behavior may result from communication with the role set, modeling the behavior of other individuals with similar positions, or through self-perceptions.

The aforementioned theory further argues that the focal person performs acts based on three major contingencies: (1) Ca-p, a given act leads to a certain product or a certain amount of that product; (2) Cp-e, a given product or an amount of that product leads to a certain evaluation by a member of the role set; (3) Ce-o, a given evaluation leads to a certain outcome (reward, punishment). For example, in a work organization, the outcome related to receiving a favorable evaluation from a supervisor or co-worker may be a promotion, an increase in pay, social support, or a pat on the back. The outcome associated with a negative evaluation from a supervisor or co-worker may be a demotion, a decrease in pay, termination, loss of social support or a decrease in respect for the focal person.

A "sent role" represents a single set of product-to-evaluation contingencies by one member of the role set. Consequently, role conflict occurs when the focal person receives incompatible product-to-evaluation contingencies. This could occur (1) if two role senders have conflicting views of how a given task should be completed (i.e., intersender conflict), (2) if the product-to-evaluation contingencies sent by one person are difficult to complete due to time constraints (i.e., role overload) or lack of skill, or (3) when the product-to-evaluation contingency violates the values or needs of the focal person (i.e., person-role conflict). According to this theory, role ambiguity occurs when the focal persons are uncertain about the product-to-evaluation contingencies and are aware of their own uncertainty about them (Naylor et. al., 1980).

This theory also explains why research using the well-known House, Rizzo and Lirtzman (1972) scale for measurement of role conflict and ambiguity has produced conflicting results in investigating the relationship between role conflict and job satisfaction. Sales (1969) and Tosi (1971) found role conflict to be correlated with several job outcomes including job satisfaction, whereas Rizzo, House, and Lirtzman (1970) and Hamner and Tosi (1974) found little or no relationship between the two variables. As Naylor, Pritchard and Ilgen (1980) and McGrath (1976) point out, the items on the widely used House and Rizzo (1972) scale, "I work under incompatible policies and guidelines" and "I receive incompatible requests from two or more people," fail to consider whether the focal person values the outcomes or perceived consequences related to the role conflict. The focal person must "value" the outcomes associated with the evaluations before role conflict can lead to stress, which in turn effects job satisfaction. In other words, the focal person must value the consequences of not conforming to role expectations before a relationship can be detected between role conflict and job satisfaction.

Furthermore, conflict is greatest when incompatible product-to-evaluation contingencies are each strongly associated with valued outcomes (Naylor, Pritchard & Ilgen, 1980). Conflict decreases if the focal person does not value the outcomes associated with the evaluations. When the valence of the outcomes is zero, no conflict should exist although the product-to-evaluation contingencies are incompatible. Likewise,

before role ambiguity can effect job satisfaction, the focal persons must value the outcomes associated with conforming to the role expectations of the role set.

Naylor, Pritchard and Ilgen Theory vs. Expectancy Theory

The basic premises of expectancy theories and Naylor, Pritchard and Ilgen's theory are very similar. For example, the Porter-Lawler (1968) expectancy theory views individuals as rational and thoughtful entities behaving in a manner which will increase their pleasure and reduce discomfort. Behavior is predicated on three factors: (1) expectancy that efforts will lead to intended behavioral performance -- E-P; (2) the expectancy that performance will lead to an outcome--P-O; and (3) valence of outcome(s). In order to determine a course of action for a given situation, individuals must evaluate the expectancies (E-P, P-O) and the valence of outcomes.

The E-P expectancy is determined by factors, such as self-esteem, past and present experiences in similar situations, and communication with others. The P-O expectancy is determined by past experiences in similar situations, attractiveness of outcomes, belief in internal versus external control, the E-P expectancy, the actual situation, and communication with others (Lawler, 1973).

Expectancy theory differs from NPI theory in three major aspects: (1) In NPI theory, motivation is viewed as a resource allocation process in which individuals distribute their time and effort in order to receive maximum gain. Incorporating the resource allocation process into the theory takes into account individual differences in ability, as well as motivation; (2) Unlike expectancy theory, which uses one overall effort-

to-performance contingency (expectancy) for explaining behavior, NPI theory purports that individuals evaluate many patterns of relationships between sets of acts and sets of products in order to determine which contingency will yield the desired result; and (3) NPI theory divides the performance-to-outcome contingency in expectancy theory into two separate contingencies: product-to-evaluation and evaluation-to-outcome. This was done in order to illustrate that the relationship between a particular level of performance and a desired outcome may be mediated by the evaluation of that performance by the focal person's supervisor or co-workers. In light of the information above, NPI theory is used as the theoretical foundation for this study.

Study Objectives and Research Hypotheses

The major goal of this study is to test the validity of Naylor, Pritchard, and Ilgen's theory, as it applies to role conflict and role ambiguity. NPI theory states that incompatible role expectations are a necessary but not sufficient condition of conflict and that in order for conflict to be experienced the outcomes associated with the conflict must be known and valued. Because the role conflict literature is filled with inconsistencies concerning the relationship of role conflict and role ambiguity with satisfaction, anxiety, and performance, the relationships between these variables are the focus of this study. By examining this theory perhaps a better understanding of the measurement and nature of role conflict and role ambiguity will result. The testable research hypotheses are listed below.

Hypothesis #1. The value or salience of outcomes and contingencies related to product-to-evaluation and evaluation-to-outcome moderate the relationship between role stress and academic satisfaction.

Hypothesis #2. The value or salience of outcomes and contingencies related to product-to-evaluation and evaluation-to-outcome moderate the relationship between role stress and social satisfaction

Hypothesis #3. The value or salience of outcomes and contingencies related to product-to-evaluation and evaluation-to-outcome moderate the relationship between role stress and anxiety.

Hypothesis #4. The value or salience of outcomes and contingencies related to product-to-evaluation and evaluation-to-outcome moderate the relationship between role stress and performance.

CHAPTER II

METHOD

Sample

The sample consisted of 154 undergraduate students enrolled in a medium sized technological university. One hundred and one males and 53 females participated in the study. Overall, 70 freshmen, 37 sophomores, 25 juniors and 22 seniors served as subjects. All students where enrolled at least two consecutive prior quarters. Students who completed the study received extra credit from their professors.

Research variables and instruments

Outcome Variables. The outcome variables that were correlated with role stress were satisfaction, anxiety, and performance. These variables were chosen because of the need to explain the inconsistencies in the literature concerning the relationships of these variables with role conflict and role ambiguity.

Satisfaction. Academic and social satisfaction were measured using scales in a questionnaire developed by Van Hein (1991). The academic satisfaction scale, which has 12 items, contains items about satisfaction with the student role, instructors, and classes. It was developed from the satisfaction scales of Morstain (1977), Bean & Bradley (1986) and Pascarella & Terenzini (1980). During a pilot study on members of the undergraduate populations chosen for the present research, an alpha coefficient of .86 was obtained as a reliability estimate. The social satisfaction scale, which has four items, contains items about satisfaction with social life and extracurricular activities. It was developed using the Peer-Group interaction scale by Pascarella & Terenzini (1980), and the Feelings about

College Scale by Okun, Kandash, Stock, Sandler & Baumann (1986). An alpha coefficient of .65 was obtained during the pilot study.

Anxiety. The State-Trait Anxiety Inventory (STAI) (Spielberger, Gorsuch & Lushene, 1970) is a 40 item instrument designed to measure trait and state anxiety. The trait subscale, which consists of 20 items, measures "anxiety proneness". The 20 item state subscale assesses transitory feelings of anxiety. For the trait measure the STAI manual reports test-retest reliabilities of .84 for females and .76 for males after a 20 day interval and .73 and .77 after 104 days. State test-retest reliabilities were .33 (males) and .16 (females) after a 20 day period. According to the manual the alpha reliability coefficients for the sample ranged from .82 to .92 for both scales.

Performance. Self-reported cumulative grade point average (GPA) was used as a measure of school performance.

Role Conflict and Role Ambiguity. The Rizzo, House & Lirtzman (1970) questionnaire contains thirteen role conflict and role ambiguity items which cover the various types of intrarole conflict identified in Kahn et al.'s (1964) research. The first eight items are role conflict items and the other five items measure role ambiguity. In addition to these items, questions concerning the frequency of role conflict/role ambiguity, the contingencies related to product-to-evaluation and evaluation-to-outcome as well as the valence of outcomes will also be contained in this questionnaire. The product-to-evaluation contingency (P-E) is designed to access the probability that role conflict/ambiguity situations have resulted in a negative evaluation from the respondent and significant others such as professors, friends, and parents. The evaluation-to-outcome

(E-O) contingency is designed to access the probability that the negative evaluations from the respondent, professors, friends and parents have resulted in negative outcomes (e.g., low grades, unsatisfying social life, low self esteem). Finally, the valence (V) of outcomes is determined by the degree to which students value the outcomes.

Controlled variables. In order to more accurately detect the relationships between the main variables (e.g., role conflict, role ambiguity, anxiety, satisfaction and performance) the effects of Positive affectivity (PA) and Negative affectivity (NA) on these variables was examined. Research evidence suggests that individuals high in PA and NA tend to have stable mood dispositions regardless of the degree of role conflict or role ambiguity (Brief, Burke, George, Robinson and Webster, 1988; Levin and Stokes, 1989). Certain demographic information (e.g., sex, age, major) were also collected and examined.

Positive Affectivity and Negative Affectivity. Positive and Negative Affectivity were measured with the Positive and Negative Affect Schedule (PANAS) which was developed by Watson, Clark & Tellegen (1988). The schedule contains a total of twenty items: 10 that measure positive affectivity and 10 that measure negative affectivity. Alpha reliabilities for the PA items range from .85 to .87, and from .86 to .90 for the NA items (Watson et al., 1988). Adequate test-retest reliabilities, convergent and divergent validity data is also provided by the PANAS authors.

Procedure

Pilot Data: Approximately 70 students participated in a pilot study to determine the relevance of the Rizzo et al. (1970) measure. The format and wording of the 13 role

conflict and ambiguity items in Rizzo et al. (1970) measure were developed based on the responses obtained during a pilot study. Because the Rizzo et. al. (1970) items were originally designed for industry, rewording of some items was necessary to make the items relevant to the student sample. The reliabilities of the outcome variables were also examined.

The Present Study

Under classroom instruction, all subjects completed the modified Rizzo et al. (1970) measure, the anxiety scale, satisfaction scales, the positive affectivity scale and negative affectivity scale and a Personal Information sheet. This order of presentation was maintained for all subjects. Subjects completed the experiment in one day under the supervision of the experimenter

Subjects received oral and written instructions for the Rizzo et al. (1970) measure and for the positive and negative affectivity scale. Written instructions were provided for the other scales. Questions and comments concerning the study were strongly encouraged. Upon completion of the questionnaires the subjects were debriefed and all questions concerning the experiment were answered.

CHAPTER III

RESULTS

Factor Analysis of Rizzo et al. (1970) Measure

Common factor analysis was performed on the thirteen (13) role conflict and role ambiguity items from the Rizzo et al (1970) measure to determine whether role conflict and role ambiguity were two separate distinct factors. A scree plot (see Figure 1) was used to determine the number of factors to retain. The plot indicated that a one factor model was best suited for this data. This factor was named *Role Stress*. The factor analysis results provide support for studies by Tracy and Johnson (1981) and McGee, Ferguson & Brief (1977) that showed evidence that role conflict and ambiguity, as measured by Rizzo et al.'s (1970) questionnaire, are different indicators of one general construct (e.g., role stress, role confusion, or role comfort) and not two distinct constructs.

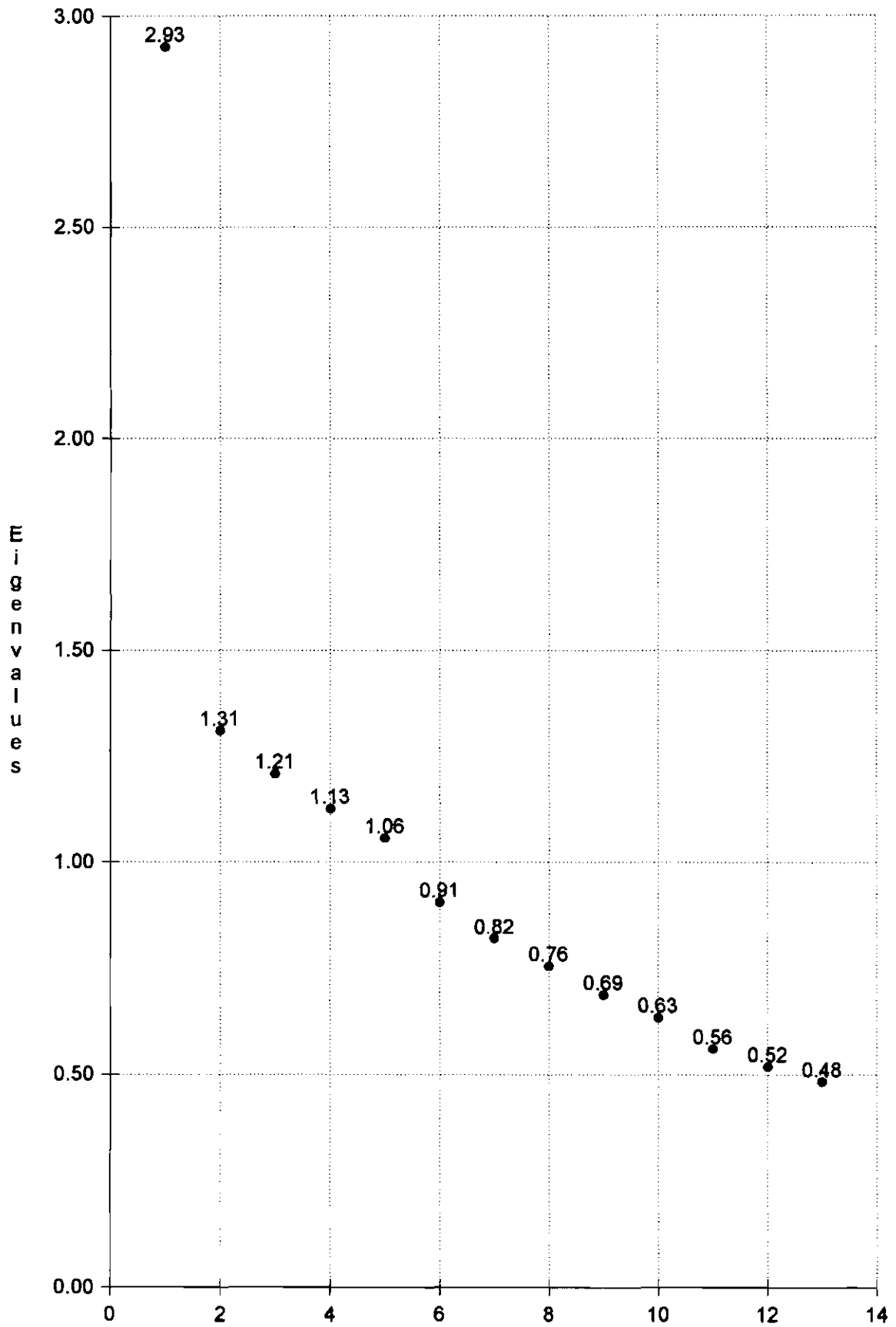


Figure 1: Factor Analysis of Role Conflict Scale

Role Conflict/Role Ambiguity Statistics

Means and standard deviations for each role conflict and role ambiguity item on the Rizzo et al. (1970) scale are listed in Table 1. The eighth role conflict item {Professors have different standards for the quality and quantity of work that must be done in their courses} obtained the highest mean (5.29) and the first role ambiguity item {Professors' courses are not well organized; there are often no clear planned goals and objectives for my courses} obtained the lowest mean (1.82). High means were also obtained for seventh and fifth role conflict item and the second role ambiguity item. These three items involve time management and the inability to balance school and social activities.

Group Differences

No significant differences in role stress based on sex were found. Likewise, no significant differences in role stress based on class level were found.

Correlations of Role Stress and Outcome Variables

Product moment correlations were calculated for role stress and the outcome variables to determine whether significant relationships existed among the variables. Role Stress was significantly correlated with many of the outcome variables, but most notably with academic satisfaction, social satisfaction, state anxiety, trait anxiety and negative affectivity. Role Stress was not significantly correlated with school performance.

Moderating Effects of P-E, E-O, and V on Role Stress and Academic Satisfaction

To test hypothesis #1, regression and blockwise selection were used to determine whether the contingencies relating to P-E and E-O and the valence (V) of outcomes are moderates of the relationship between role stress and academic satisfaction (See Table 3). Academic satisfaction was regressed on a block of variables containing the Contingencies (P-E, E-O) and the valence of outcomes. The block accounted for 18% of the variance { $F(3,146) = 10.49, p < .000$. } The combination of the block and role stress accounted for 22% of variance in Academic satisfaction { $F(4,145) = 10.42, p < .000$. }. These results support hypothesis #1.

Partial correlations between role stress and academic satisfaction controlling the contingencies (P-E, E-O) and valence of outcomes were conducted to assess the effect of individual moderators and combinations of the moderators (See Table 4). The zero order correlation between role stress and academic satisfaction was $-.4302^{**}$, but decreased to $-.2074^{**}$ when P-E was controlled, $-.2536^{**}$ when E-O was controlled, $-.4389^{**}$ when valence was controlled, $-.2029^{**}$ when P-E and E-O were controlled, and $-.2393^{**}$ when P-E, E-O and Valence were controlled. These results indicate that although the P-E contingency had the largest individual impact on the relationship between role stress and academic satisfaction, the combination of the P-E and E-O contingency was the stronger moderator.

Moderating Effects of P-E, E-O, V on Role Stress and Social Satisfaction

Using regression and blockwise selection social satisfaction was regressed on a block of variables containing the P-E and E-O contingencies and valence of outcomes (See Table 3). This block accounted for 4% of the variance in Social Satisfaction. The combination of the block and role stress accounted for only 7% of the variance in Social Satisfaction. These results indicate that the combination of contingencies and valence of outcomes do not significantly moderate the relationship between role stress and social satisfaction. However, when the effects of the variables were examined individually the results show that the P-E contingency is the strongest individual moderator and that the combination of the P-E and E-O contingencies is the strongest combined moderator of relationship between role stress and social satisfaction (See Table 4).

Table 1
Means and Standard Deviations for
Role Conflict and Role Ambiguity Items

Role Conflict/Ambiguity Items	Mean	Standard Deviation
RC1	3.0596	1.2428
RC2	2.7020	1.6565
RC3	2.8609	1.6167
RC4	2.3841	1.5994
RC5	3.9114	2.0783
RC6	3.0000	2.0033
RC7	4.1523	2.0355
RC8	5.2914	2.0020
RA1	1.8211	1.2811
RA2	3.1192	2.0589
RA3	1.9735	1.4373
RA4	2.6954	1.7127
RA5	2.7483	1.6861

Role Conflict and Role Ambiguity items are listed in Appendix A.
Rating Scale: "1" not-true to "7" always true

**Table 2. Correlation Matrix
Role Stress and Outcome Variables**

	Role Stress	Academic Satisfaction	Social Satisfaction	G.P.A.	Trait Anxiety	State Anxiety	Negative Affect	Positive Affect
Role Stress	1.0000	-.4302**	-.2265**	-.1588	.3797**	.3469**	.2093**	-.1224
Academic Satisfaction	-.4302**	1.0000	.5276**	.4045**	-.4646**	-.3301**	-.2635**	.3857**
Social Satisfaction	-.2265**	.5276**	1.0000	.1237	-.3742**	-.2668**	-.3051**	.3315**
G.P.A.	-.1588	.4045**	.1237	1.0000	-.0894	-.0197	-.0942	.0537
Trait Anxiety	.3797**	-.4646**	-.3742**	-.0894	1.0000	.5573**	.5728**	-.4906**
State Anxiety	.3468**	-.3301**	-.2668**	-.0197	.5573**	1.0000	.4884**	-.4481**
Negative Affectivity	.2093**	-.2635**	-.3051**	-.0942	.5728**	.4884**	1.0000	-.2710**
Positive Affectivity	-.1224	.3857**	.3315**	.0537	-.4906**	-.4481**	-.2710**	1.0000

* < .05 ** < .01 (2 tailed)

Table 3
Regression: Moderating Effects of P-E, E-O and V on Role Stress
Academic Satisfaction and Social Satisfaction

Role Stress and Academic Satisfaction

<u>Variable Entered</u> <u>At Each Step</u>	<u>R²</u>	<u>R² Change</u>	<u>Significant F</u>
Block (P-E, E-O, V)	.177	.177	.000
Role Stress	.224	.047	.000

Role Stress and Social Satisfaction

<u>Variable Entered</u> <u>At Each Step</u>	<u>R²</u>	<u>R² Change</u>	<u>Significant F</u>
Block (P-E, E-O, V)	.036	.036	.145
Role Stress	.071	.035	.029

Table 4
Zero Order and Partial Correlations between Role Stress,
Academic and Social Satisfaction
Controlling the P-E, E-O Contingency and the Valence of Outcomes

<u>Role Stress and Academic Satisfaction</u>		<u>Role Stress and Social Satisfaction</u>	
zero order	-.4302**	zero order	-.2265**
controlling negative affect	-.3975**	controlling negative affect	-.1746*
controlling positive affect	-.4182**	controlling positive affect	-.1985*
controlling P-E	-.2074*	controlling P-E	-.1670*
controlling E-O	-.2536**	controlling E-O	-.1783*
controlling V	-.4389**	controlling V	-.2649**
controlling P-E, E-O	-.2029*	controlling P-E, E-O	-.1653*
controlling P-E, E-O, V	-.2393**	controlling P-E, E-O, V	-.1902*

* P < .05
 ** P < .001

(two tailed)

Moderating Effects of P-E, E-O, and V on Role Stress and Trait Anxiety

To test hypothesis #3, regression techniques were also used to regress Trait Anxiety on the block containing the contingencies (P-E, E-O) and valence of outcomes (See Table 5). The block accounted for 16% of the variance in Role Stress. When Trait Anxiety enters the equation the block and anxiety account for 17% of variance in Role Stress. These results were significant and support the use of the contingencies and valence of outcomes as moderators.

Partial correlations between role stress and anxiety controlling for the contingencies and valence of outcomes were conducted to assess the effect of these variables individually and in combinations (See Table 6). The zero order correlation between role stress and anxiety is .3797**. The P-E contingency was the strongest moderator. The combination of P-E and E-O contingency were the strongest combination of moderators for the relationship between role stress and anxiety.

Moderating Effects of P-E, E-O and V on Role Stress and G.P.A.

To test hypothesis #4, G.P.A was regressed on the block of P-E and E-O contingencies and the valence of outcomes (See Table 5). The block accounted for 8% of the variance { $F(3, 145) = 4.01, p < .01$ }. The combination of the block and role stress accounted for 8% of the variance { $F(4, 144) = 2.99, p < .05$ }. Although the relationship between role stress and GPA is not significant, the results indicate that the variables in the block do moderate this relationship. Again, the P-E contingency was the strongest individual moderator and the combination of the P-E and E-O contingencies was the strongest combined moderator of Role Stress and G.P.A (See Table 6).

Table 5
Regression: Moderating Effects of P-E, E-O and V on Role Stress,
Trait Anxiety, and GPA

Role Stress and Anxiety

<u>Variable Entered At Each Step</u>	<u>R²</u>	<u>R² Change</u>	<u>Significant F</u>
Block (P-E, E-O, V)	.164	.164	.000
Role Stress	.173	.009	.000

Role Stress and G.P.A.

<u>Variable Entered At Each Step</u>	<u>R²</u>	<u>R² Change</u>	<u>Significant F</u>
Block (P-E, E-O, V)	.077	.077	.008
Role Stress	.077	.000	.020

Table 6
Zero Order and Partial Correlations between
Role Stress, Trait Anxiety and GPA
Controlling the P-E, E-O Contingency and the Valence of Outcomes

<u>Role Stress and Trait Anxiety</u>		<u>Role Stress and GPA</u>	
zero order	.3797**	zero order	-.1588
controlling negative affect	.3241**	controlling negative affect	-.1433
controlling positive affect	.3696**	controlling positive affect	-.1537
controlling P-E	.0989	controlling P-E	.0275
controlling E-O	.1393	controlling E-O	.0235
controlling V	.2959**	controlling V	-.1893*
controlling P-E, E-O	.0982	controlling P-E, E-O	.0352
controlling P-E, E-O, V	.0994	controlling P-E, E-O, V	.0040

* P < .05

** P < .001

CHAPTER IV

DISCUSSION

The main purpose of this study was to test Naylor, Pritchard, and Ilgen's (1980) theory as it applies to role conflict and role ambiguity. This objective was accomplished by determining whether three variables, the probability that role stress leads to negative evaluations (P-E), the probability that evaluations lead to negative outcomes (E-O), and the value (V) of outcomes, were moderators of the relationships between role stress and certain outcome variables.

As predicted, the study does partially support Naylor, Pritchard and Ilgen's theory. The combination of the contingencies (P-E, E-O) and the valence(V) of outcomes do moderate the relationships between role stress, academic satisfaction and anxiety, but not the relationships between role stress, social satisfaction, and G.P.A. Individually, the (P-E) contingency proved to be the strongest individual moderator of all role stress and outcome variable relationships, whereas the valence (V) of outcome variable was in general the weakest individual moderator. Likewise, the contingencies (P-E, E-O) proved to be the best combination of moderators. A likely reason for this result could be subject unwillingness to completely fill out the questionnaire parts relating to the valence of outcomes. After reviewing the completed questionnaires it became apparent that many subjects were willing to list whether a role stress situation resulted in negative evaluations (P-E) and whether the negative evaluations led to certain outcomes (E-O), but they were unwilling to list all the possible outcomes and place a value on the outcomes. In the

future, to obtain more accurate data, it may be necessary to give the role stress measure during personal interviews instead of through a group administration.

Better measures of role conflict and role ambiguity should be developed for use among student samples based on the factor analysis results for the Rizzo et al. (1970) questionnaire. Although the items on this questionnaire loaded on one factor, this factor accounted for only 22% of the variance. Previous authors have suggested that perhaps poor content validity (King & King, 1990) or poor item wording (Tracy & Johnson, 1981) could be the problem.

The non-significant correlations between role stress and performance may be due solely to the way in which performance data was obtained. Self-reported grade point average (G.P.A.) was used as a performance indicator when registrar resistance was encountered. If G.P.A.s were obtained from university records we may have had a more accurate indication of role stress and performance. Although negative and positive affectivity did account for some of the variance in the relationships between role stress and the outcome variables, the effect was very minimal. The variance due to negative affectivity ranged from 2% to 6% on average and from 1% to 3% for positive affectivity.

Implications

The overall goal of the present research was an increased understanding of the nature of role conflict/role ambiguity and its consequences. The results of this study lend support to the premise that role stress (role conflict/role ambiguity) is a necessary but not sufficient condition for negative consequences (e.g., low role satisfaction). The *context* in which role stress is experienced is an important factor in the way individuals react to these

stressful situations. Even though a student population was used, these findings may prove useful to managers in organizations as well as university administrators. This study enables managers and officials in higher education to understand the consequences of role stress, such as increased dissatisfaction and anxiety and decreased performance. It also provides a better understanding of the dynamics involved in preventing role stress from resulting in negative consequences for students and workers. Managers and university administrators interested in improving performance, satisfaction, and reduction of anxiety levels, should be trained to identify the different types of role stress and its potential consequences. They should also be aware that although most role stress is inevitable the consequences of it can be ameliorated by lessening the degree to which role stress leads to negative consequences and outcomes.

The conflicting results of many role conflict and role ambiguity studies suggest that a better understanding of the theory and methodology about this topic are in order. It is hoped that this research will provide academicians and practitioners with a better understanding of the nature of role stress and its consequences.

APPENDIX A

This questionnaire contains questions about your experiences as a Georgia Tech student DURING THE LAST TWO QUARTERS. There are thirteen statements in this questionnaire. Each statement is boldfaced and underlined. Please answer the questions pertaining to each of the **thirteen** (13) statements.

In my work as a student....

**1.PROFESSORS ASSIGNMENTS OR LECTURES DO NOT LEAD TO A
BETTER UNDERSTANDING OF COURSE MATERIAL.**

- a. To what degree is this statement true?

1-----2-----3-----4-----5-----6-----7
Not True True Sometimes Always True

****If you answered "Not True" to question "a" do not complete b-F, go to statement #2**

- b. What is the likelihood that this situation has negatively affected your **professors'** evaluation of your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
No likelihood Great likelihood

What is the likelihood that there are negative consequences of your **professors'** perceptions or evaluations? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
No likelihood Great likelihood

- c. What is the likelihood that this situation has negatively affected your **friends'** evaluation of your friendship or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **friends'** perceptions or evaluations (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- d. What is the likelihood that this situation has negatively affected your **parents** or another significant other's evaluation of you or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **parents** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- e. What is the likelihood that this situation has negatively affected **your** evaluation or perception of your school work?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of **your** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- f. Please list the people/person (list titles not actual names) who have given you a negative evaluation as a result of STATEMENT #1 (Refer to your answers on questions b,c,d,e). Also list the consequences of this evaluation and how much you value this consequence. Use the scale below to estimate the value of the consequence.

1-----2-----3-----4-----5-----6-----7
 No Value Great
 Value Somewhat Value

Evaluator	Consequence	Value
* TEACHER	BAD GRADE	6
*		
*		
*		

2. **PROFESSORS ASSIGN "BUSY WORK" (i.e., assignments that take up a lot of time but do not add to my knowledge of course material.)**

a. To what degree is this statement true?

1-----2-----3-----4-----5-----6-----7
 Not True True Sometimes Always True

****If you answered "Not True" to question "a" do not complete b-f, go to statement #3.**

b. What is the likelihood that this situation has negatively affect your **professors'** evaluation of your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of your **professors'** perceptions or evaluations? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- c. What is the likelihood that this situation has negatively affected your **friends'** evaluation of your friendship or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **friends'** perceptions or evaluations?(Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- d. What is the likelihood that this situation has negatively affected your **parents** or another significant other's evaluation of you or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **parents'** perceptions or evaluations?(Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- e. What is the likelihood that this situation has negatively affected **your** evaluation or perception of your school work?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of **your** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- f. Please list the people/person (list titles not actual names) who have given you a negative evaluation as a result of STATEMENT #2 (Refer to your answers on questions b,c,d,e). Also list the consequences of this evaluation and how much you value this consequence. Use the scale below to estimate the value of the consequence.

1-----2-----3-----4-----5-----6-----7
 No Value Great
 Value Somewhat Value

Evaluator	Consequence	Value
* TEACHER	BAD GRADE	6
*		
*		
*		

3. **PROFESSORS DO NOT ANSWER QUESTIONS ABOUT COURSE MATERIAL OR PROVIDE ADEQUATE ASSISTANCE WITH CLASS ASSIGNMENTS.**

- a. To what degree is this statement true?

1-----2-----3-----4-----5-----6-----7
 Not True True Sometimes Always True

****If you answered "Not True" to question "a" do not complete b-f, go to statement #4.**

- b. What is the likelihood that this situation has negatively affected your **professors'** evaluation of your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of your **professors'** perceptions or evaluations? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- c. What is the likelihood that this situation has negatively affected your **friends'** evaluation of your friendship or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **friends'** perception evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- d. What is the likelihood that this situation has negatively affected your **parents** or another significant other's evaluation of you your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **parents'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- e. What is the likelihood that this situation has negatively affected **your** evaluation or perception of your school work?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of **your** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- f. Please list the people/person (list titles not actual names) who have given you a negative evaluation as a result of STATEMENT #3 (Refer to your answers on questions b,c,d,e). Also list the consequences of this evaluation and how much you value this consequence. Use the scale below to estimate the value of the consequence.

1-----2-----3-----4-----5-----6-----7
 No Value Great
 Value Somewhat Value

Evaluator	Consequence	Value
* TEACHER	BAD GRADE	6
*		
*		
*		

- c. What is the likelihood that this situation has negatively affected your **friends'** evaluation of your friendship or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **friends'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- d. What is the likelihood that this situation has negatively affected your **parents** or another significant other's evaluation of you or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **parents** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- e. What is the likelihood that this situation has negatively affected **your** evaluation or perception of your school work?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of **your** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- f. Please list the people/person (list titles not actual names) who have given you a negative evaluation as a result of STATEMENT #4 (Refer to your answers on questions b,c,d,e). Also list the consequences of this evaluation and how much you value this consequence. Use the scale below to estimate the value of the consequence.

1-----2-----3-----4-----5-----6-----7
 No Value Great
 Value Somewhat Value

Evaluator	Consequence	Value
* TEACHER	BAD GRADE	6
*		
*		
*		

5. **MY SCHOOL SCHEDULE OFTEN CONFLICTS WITH MY SOCIAL LIFE.**

- a. To what degree is this statement true?

1-----2-----3-----4-----5-----6-----7
 Not True True Always
 True Sometimes True

****If you answered "Not True" to question "a" do not complete b-f, go to statement #6.**

- b. What is the likelihood that this situation has negatively affected your **professors'** evaluation of your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
 likelihood

What is the likelihood that there are negative consequences of your **professors'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
 likelihood

- c. What is the likelihood that this situation has negatively affected your **friends'** evaluation of your friendship or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **friends'** perceptions or evaluations? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- d. What is the likelihood that this situation has negatively affected your **parents** or another significant other's evaluation of you or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **parents'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- e. What is the likelihood that this situation has negatively affected **your** evaluation or perception of your school work?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of **your** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- f. Please list the people/person (list titles not actual names) who have given you a negative evaluation as a result of STATEMENT #5 (Refer to your answers on questions b,c,d,e). Also list the consequences of this evaluation and how much you value this consequence. Use the scale below to estimate the value of the consequence.

1-----2-----3-----4-----5-----6-----7
 No Value Great
 Value Somewhat Value

Evaluator	Consequence	Value
* TEACHER	BAD GRADE	6
*		
*		
*		

6. **IT IS NECESSARY TO CHEAT ON ASSIGNMENTS OR TESTS IN ORDER TO RECEIVE A GOOD GRADE.**

- a. To what degree is this statement true?

1-----2-----3-----4-----5-----6-----7
 Not True True Always
 True Sometimes True

****If you answered "Not True" to question "a" do not complete b-f, go to statement #7.**

- b. What is the likelihood that this situation has negatively affected your **professors'** evaluation of your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of your **professors'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- c. What is the likelihood that this situation has negatively affected your **friends'** evaluation of your friendship or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **friends'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- d. What is the likelihood that this situation has negatively affected your **parents** or another significant other's evaluation of you or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **parents** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- e. What is the likelihood that this situation has negatively affected **your** evaluation or perception of your school work?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of **your** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- f. Please list the people/person (list titles not actual names) who have given you a negative evaluation as a result of STATEMENT #6 (Refer to your answers on questions b,c,d,e). Also list the consequences of this evaluation and how much you value this consequence. Use the scale below to estimate the value of the consequence.

1-----2-----3-----4-----5-----6-----7
 No Value Somewhat Great Value

Evaluator	Consequence	Value
* TEACHER	BAD GRADE	6
*		
*		
*		

7. **I DO NOT HAVE ENOUGH TIME TO ADEQUATELY COMPLETE ASSIGNMENTS OR STUDY FOR TESTS BECAUSE DIFFERENT PROFESSORS MAKE THESE REQUESTS AT THE SAME TIME.**

a. To what degree is this statement true?

1-----2-----3-----4-----5-----6-----7
 Not True True Sometimes Always True

****If you answered "Not True" to question "a" do not complete b-f, go to statement #8.**

b. What is the likelihood that this situation has negatively affected your **professors'** evaluation of your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of your **professors'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- c. What is the likelihood that this situation has negatively affected your **friends'** evaluation of your friendship or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of your **friends'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- d. What is the likelihood that this situation has negatively affected your **parents** or another significant other's evaluation of you or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of your **parents'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- e. What is the likelihood that this situation has negatively affected your evaluation or perception of your school work?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of **your** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- f. Please list the people/person (list titles not actual names) who have given you a negative evaluation as a result of STATEMENT #7 (Refer to your answers on questions b,c,d,e). Also list the consequences of this evaluation and how much you value this consequence. Use the scale below to estimate the value of the consequence.

1-----2-----3-----4-----5-----6-----7
 No Value Great
 Value Somewhat Value

Evaluator	Consequence	Value
* TEACHER	BAD GRADE	6
*		
*		
*		

8. **PROFESSORS HAVE DIFFERENT STANDARDS FOR THE QUALITY AND QUANTITY OF WORK THAT MUST BE DONE IN THEIR COURSES.**

- a. To what degree is this statement true?

1-----2-----3-----4-----5-----6-----7
 Not True True Always
 True Sometimes True

****If you answered "Not True" to question "a" do not complete b-f, go to statement #9.**

- b. What is the likelihood that this situation has negatively affected your **professors'** evaluation of your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of your **professors'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- c. What is the likelihood that this situation has negatively affected your **friends'** evaluation of you or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of your **friends'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
No likelihood Great
likelihood

- d. What is the likelihood that this situation has negatively affected your **parents** or another significant other's evaluation of you or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **parents** or another significant other's perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
No likelihood Great
likelihood

- e. What is the likelihood that this situation has negatively affected **your** evaluation or perception of your school work?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
No likelihood Great
likelihood

What is the likelihood that there are negative consequences of **your** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
No likelihood Great
likelihood

- f. Please list the people/person (list titles not actual names) who have given you a negative evaluation as a result of STATEMENT #6 (Refer to your answers on questions b,c,d,e). Also list the consequences of this evaluation and how much you value this consequence. Use the scale below to estimate the value of the consequence.

1-----2-----3-----4-----5-----6-----7
 No Value Somewhat Great
 Value Value Value Value

Evaluator	Consequence	Value
* TEACHER	BAD GRADE	6
*		
*		
*		

9. **PROFESSORS' COURSES ARE NOT WELL ORGANIZED; THERE ARE OFTEN NO CLEAR, PLANNED GOALS AND OBJECTIVES FOR MY COURSES.**

- a. To what degree is this statement true?

1-----2-----3-----4-----5-----6-----7
 Not True True Always
 True Sometimes True

****If you answered "Not True" to question "a" do not complete b-f, go to statement #10.**

- b. What is the likelihood that this situation has negatively affected your **professors'** evaluation of your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
 likelihood

What is the likelihood that there are negative consequences of your **professors'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
 likelihood

- c. What is the likelihood that this situation has negatively affected your **friends'** evaluation of your friendship or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **friends'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- d. What is the likelihood that this situation has negatively affected your **parents** or another significant other's evaluation of you or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **parents'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- e. What is the likelihood that this situation has negatively affected **your** evaluation or perception of your school work?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of **your** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- f. Please list the people/person (list titles not actual names) who have given you a negative evaluation as a result of STATEMENT #9 (Refer to your answers to questions b,c,d,e). Also list the consequences of this evaluation and how much you value this consequence. Use the scale below to estimate the value of the c consequence.

1-----2-----3-----4-----5-----6-----7
 No Value Great
 Value Somewhat Value

Evaluator	Consequence	Value
* TEACHER	BAD GRADE	6
*		
*		
*		

- c. What is the likelihood that this situation has negatively affect your **friends'** evaluation of you or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **friends'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- d. What is the likelihood that this situation has negatively affected your **parents** or another significant other's evaluation of you or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **parents** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- e. What is the likelihood that this situation has negatively affected **your** evaluation or perception of your school work?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of **your** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- f. Please list the people/person (list titles not actual names) who have given you a negative evaluation as a result of STATEMENT #10 (Refer to your answers on questions b,c,d,e). Also list the consequences of this evaluation and how much you value this consequence. Use the scale below to estimate the value of the consequence.

1-----2-----3-----4-----5-----6-----7
 No Value Great
 Value Somewhat Value

Evaluator	Consequence	Value
* TEACHER	BAD GRADE	6
*		
*		
*		

11. **I DO NOT KNOW WHAT ASSIGNMENTS I MUST COMPLETE OR WHAT INFORMATION I MUST KNOW TO PERFORM WELL IN MY COURSES.**

- a. To what degree is this statement true?

1-----2-----3-----4-----5-----6-----7
 Not True True Sometimes Always True

****If you answered "Not True" to question "a" do not complete b-f, go to statement #12.**

- b. What is the likelihood that this situation has negatively affected your **professors'** evaluation of your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of your **professors'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- c. What is the likelihood that this situation will negatively affect your **friends'** evaluation of your friendship or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **friends'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

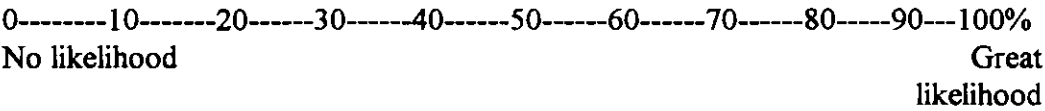
- d. What is the likelihood that this situation has negatively affected your **parents** or another significant other's evaluation of you or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

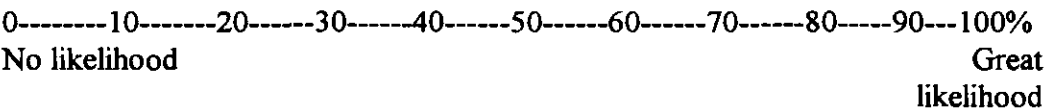
What is the likelihood that there are negative consequences of your **parents'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

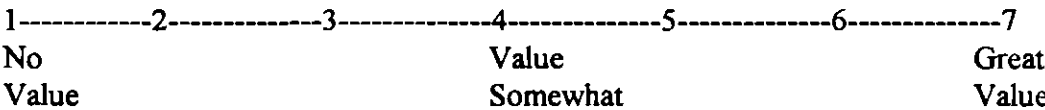
e. What is the likelihood that this situation has negatively affected **your** evaluation or perception of your school work?



What is the likelihood that there are negative consequences of **your** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)



f. Please list the people/person (list titles not actual names) who have given you a negative evaluation as a result of STATEMENT #11 (Refer to your answers on questions b,c,d,e.). Also list the consequences of this evaluation and how much you value this consequence. Use the scale below to estimate the value of the consequence.



Evaluator	Consequence	Value
* TEACHER	BAD GRADE	6
*		
*		
*		

- c. What is the likelihood that this situation has negatively affected your **friends'** evaluation of your friendship or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **friends'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- d. What is the likelihood that this situation has negatively affected your **parents** or another significant other's evaluation of you or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **parents'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- e. What is the likelihood that this situation has negatively affected **your** evaluation or perception of your school work?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of **your** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- f. Please list the people/person (list titles not actual names) who have given you a negative evaluation as a result of STATEMENT #12 (Refer to your answers on questions b,c,d,e). Also list the consequences of this evaluation and how much you value this consequence. Use the scale below to estimate the value of the consequence.

1-----2-----3-----4-----5-----6-----7
 No Value Great
 Value Somewhat Value

Evaluator	Consequence	Value
* TEACHER	BAD GRADE	6
*		
*		
*		

13. **PROFESSORS DO NOT PROVIDE CLEAR EXPLANATIONS OF HOW ASSIGNMENTS SHOULD BE COMPLETED.**

- a. To what degree is this statement true?

1-----2-----3-----4-----5-----6-----7
 Not True True Sometimes Always True

****If you answered "Not True" to question "a" do not complete b-f.**

- b. What is the likelihood that this situation has negatively affected your **professors'** evaluation of your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of your **professors'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- c. What is the likelihood that this situation has negatively affected your **friends'** evaluation of your friendship or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **friends'** perceptions or evaluations? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- d. What is the likelihood that this situation has negatively affected your **parents** or another significant other's evaluation of you or your performance as a student?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

What is the likelihood that there are negative consequences of your **parents'** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great
likelihood

- e. What is the likelihood that this situation has negatively affected **your** evaluation or perception of your school work?

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

What is the likelihood that there are negative consequences of **your** perception or evaluation? (Consequences may include low grades, unsatisfying social life, lowered self-esteem etc.,)

0-----10-----20-----30-----40-----50-----60-----70-----80-----90---100%
 No likelihood Great likelihood

- f. Please list the people/person (list titles not actual names) who have given you a negative evaluation as a result of STATEMENT #13. (Refer to your answers on questions b,c,d,e). Also list the consequences of this evaluation and how much you value this consequence. Refer to scale below to estimate the value of the consequence.

1-----2-----3-----4-----5-----6-----7
 No Value Great
 Value Somewhat Value

Evaluator	Consequence	Value
* TEACHER	BAD GRADE	6
*		
*		
*		

PLEASE REVIEW YOUR QUESTIONNAIRE FOR ACCURACY.
 THANK YOU FOR YOUR TIME AND EFFORT.

APPENDIX B
Academic Satisfaction Scale

1. Academically, I find real enjoyment being a student
 - a. strongly agree
 - b. agree
 - c. neither agree nor disagree
 - d. disagree
 - e. strongly disagree

2. I am satisfied with the opportunities to meet with instructors about course work and my progress.
 - a. strongly agree
 - b. agree
 - c. neither agree nor disagree
 - d. disagree
 - e. strongly disagree

3. For the most part, I enjoy my classes.
 - a. strongly agree
 - b. agree
 - c. neither agree nor disagree
 - d. disagree
 - e. strongly disagree

4. I consider being a student rather unpleasant.
 - a. strongly agree
 - b. agree
 - c. neither agree nor disagree
 - d. disagree
 - e. strongly disagree

5. Most of my courses are stimulating and exciting.
 - a. strongly agree
 - b. agree
 - c. neither agree nor disagree
 - d. disagree
 - e. strongly disagree

How do you feel about the following:

- 6) Your education at Georgia Tech.
 - a. very satisfied
 - b. mostly satisfied
 - c. equally satisfied and dissatisfied
 - d. mostly dissatisfied
 - e. very dissatisfied
- 7) The classes you are taking.
 - a. very satisfied
 - b. mostly satisfied
 - c. equally satisfied and dissatisfied
 - d. mostly dissatisfied
 - e. very dissatisfied
- 8) What you are learning at Tech.
 - a. very satisfied
 - b. mostly satisfied
 - c. equally satisfied and dissatisfied
 - d. mostly dissatisfied
 - e. very dissatisfied
- 9) The instructors at Tech.
 - a. very satisfied
 - b. mostly satisfied
 - c. equally satisfied and dissatisfied
 - d. mostly dissatisfied
 - e. very dissatisfied
- 10) The progress you are making toward your educational goals.
 - a. very satisfied
 - b. mostly satisfied
 - c. equally satisfied and dissatisfied
 - d. mostly dissatisfied
 - e. very dissatisfied

APPENDIX C

Social Satisfaction

- 1) I am satisfied with the opportunities to meet with other students.
 - a. strongly agree
 - b. agree
 - c. neither agree nor disagree
 - d. disagree
 - e. strongly disagree

- 2) I have enjoyed the social activities I've participated in at Tech.
 - a. strongly agree
 - b. agree
 - c. neither agree nor disagree
 - d. disagree
 - e. strongly disagree

3. How do you feel about the students you go to school with.
 - a. pleased
 - b. mostly satisfied
 - c. mixed - equally satisfied and dissatisfied
 - d. mostly dissatisfied
 - e. unhappy

4. How do you feel about the extracurricular activities at Georgia Tech.
 - a. pleased
 - b. mostly satisfied
 - c. mixed - equally satisfied and dissatisfied
 - d. mostly dissatisfied
 - e. unhappy.

APPENDIX D

State-Trait Anxiety Inventory

For the first 20 items, respond depending on how you feel **at this moment**. For items 21-40 respond depending on how you **generally feel**. Use the following scale to record your answers.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

1. I feel calm
2. I feel secure
3. I am tense
4. I feel regretful
5. I feel at ease
6. I feel upset
7. I am presently worrying over possible misfortunes
8. I feel rested
9. I feel anxious
10. I feel comfortable
11. I feel self-confident
12. I feel nervous
13. I am jittery
14. I feel "high strung"
15. I am relaxed
16. I feel content
17. I am worried
18. I feel over-excited and "rattled"
19. I feel joyful
20. I feel pleasant

How do you generally feel towards school:

1	2	3	4
Almost Never	Occasionally	Frequently	Almost Always

21. I feel pleasant
22. I tire quickly
23. I feel like crying
24. I wish I could be as happy as others seem to be
25. I am losing out on things because I can't make up my mind soon enough
26. I feel rested
27. I am "calm, cool and collected"
28. I feel that difficulties are piling up so that I cannot overcome them
29. I worry too much over something that really doesn't matter
30. I am happy
31. I am inclined to take things hard
32. I lack self-confidence
33. I feel secure
34. I try to avoid facing a crisis or difficulty
35. I feel blue
36. I am content
37. Some unimportant thought runs through my mind and bothers me
38. I take disappointments so keenly that I can't put them out of my mind
39. I am a steady person
40. I get in a state of tension or turmoil as I think over my recent concerns and interests.

APPENDIX E

Positive and Negative Affect Schedule (PANAS)

This scale consists of a number of words that describe different feelings and emotions. Read each item and mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way. Use the following scale to record your answer.

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely

interested
 distressed
 excited
 upset
 strong
 guilty
 scared
 hostile
 enthusiastic
 proud

irritable
 alert
 ashamed
 inspired
 nervous
 determined
 attentive
 jittery
 active
 afraid

APPENDIX F
Personal Information Sheet

Please Print

Name _____

Age _____ Sex _____

Major _____

Circle the correct classification:

Freshman
Sophomore
Junior
Senior
Graduate Student

How many years have you been a Georgia Tech student?

Have you been enrolled in Georgia Tech for the last two consecutive quarters?

Current G.P.A. _____

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